

GPM Spacecraft Altitude notes after boost and 1st orbit maintenance burn

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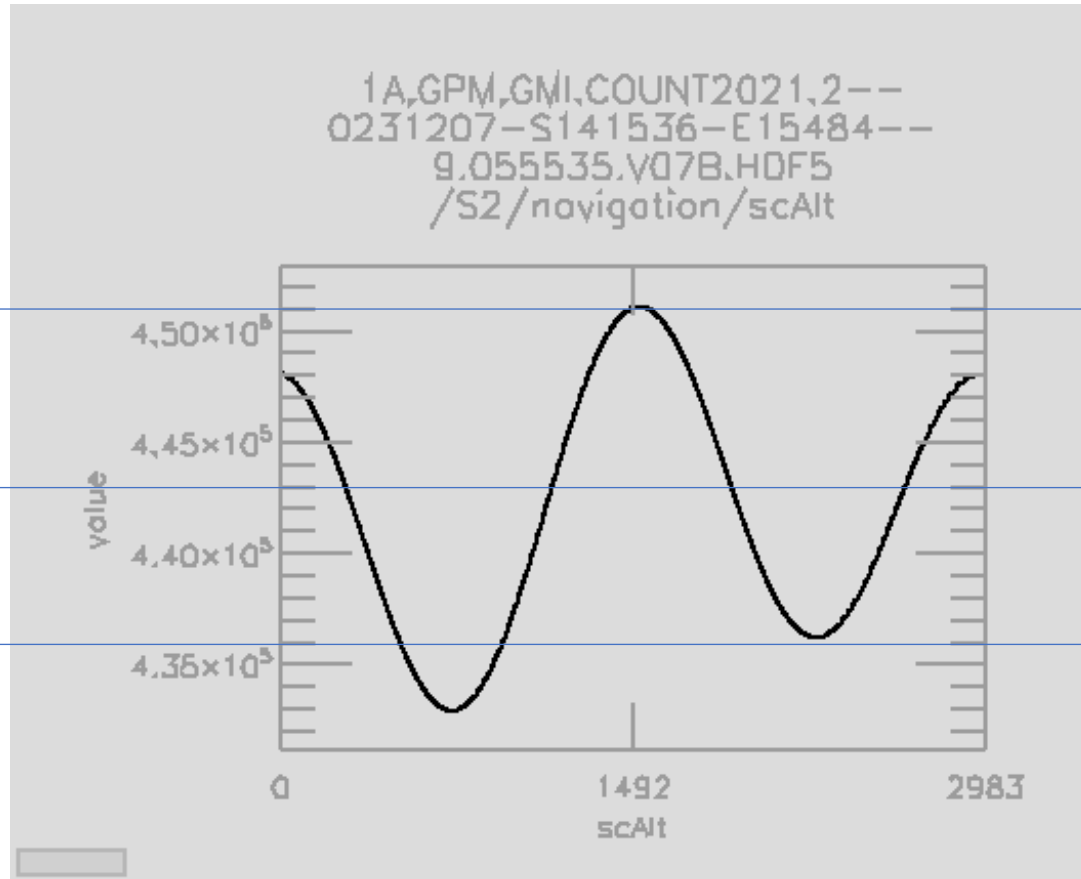
2023-12-11

I saved a few plots to compare the orbit altitude before and after the recent Drag Make-Up (DMU) maneuver # 112 on 12/7/2023.

Also showing the recent post-burn altitude history compared with an orbit just after the 35 kilometer Boost on 11/08/2023.

Comparison of orbital altitude history before and after orbit adjust (DMU # 112) on December 7th,2023

Before orbit adjust 12/7, granule 55535



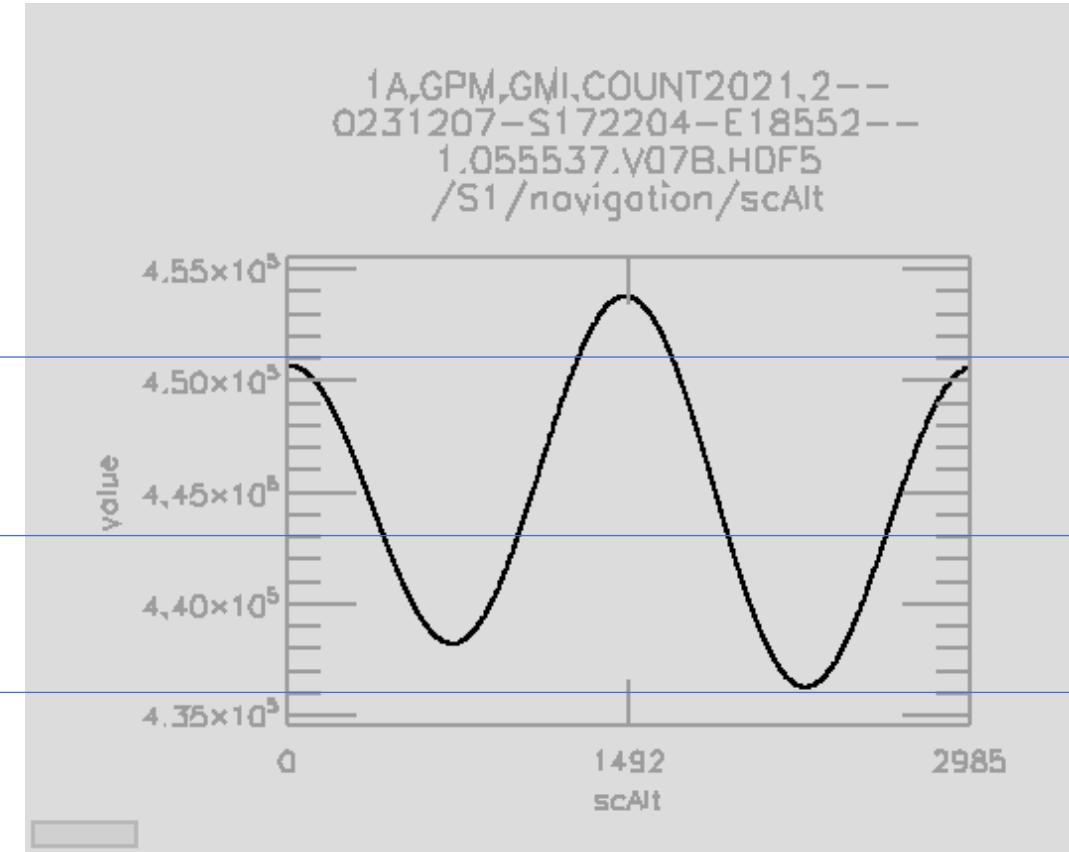
Lines mark
altitudes just
to line up Y-
axis scales

451 km

443 km

436 km

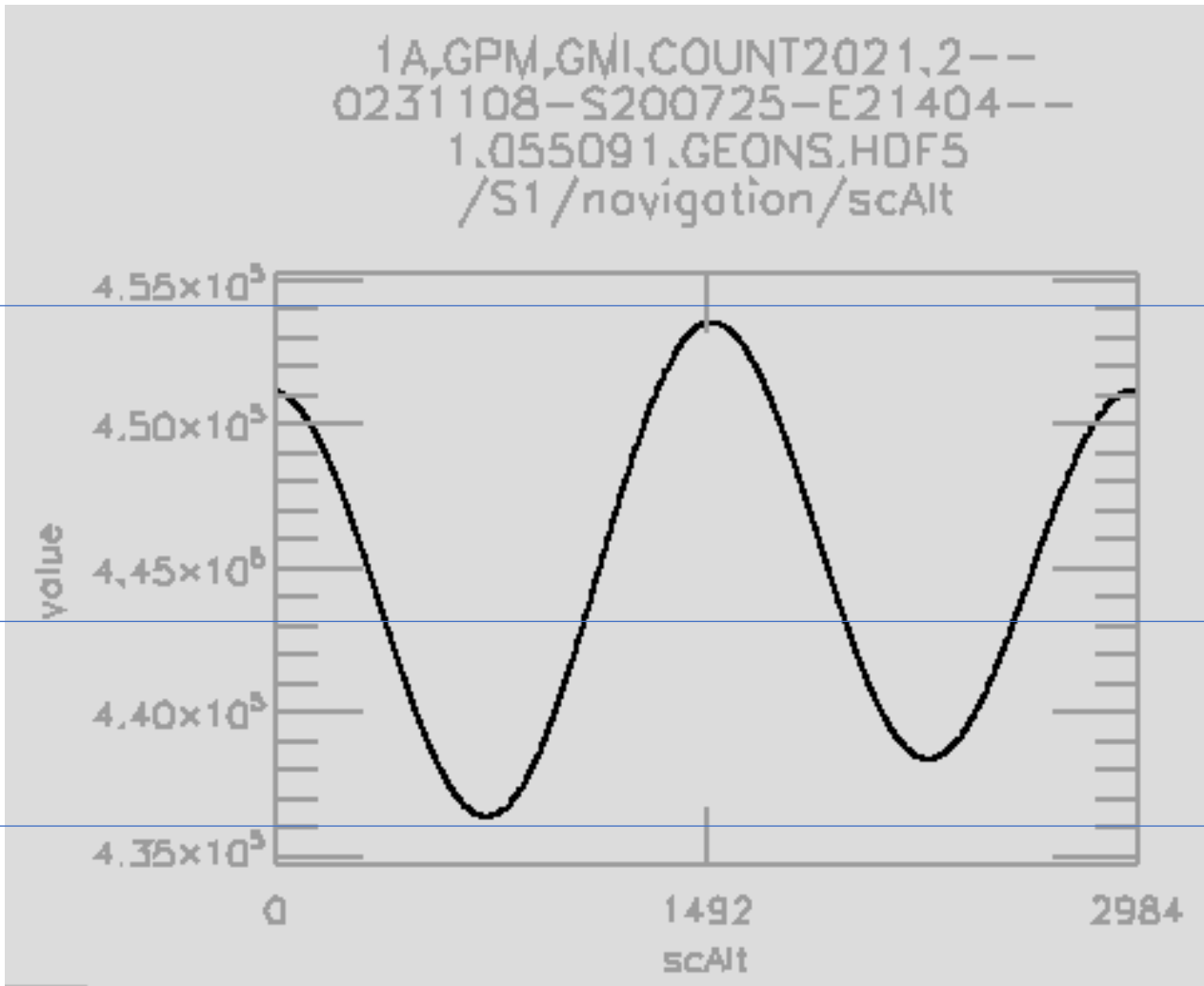
After orbit adjust 12/7, granule 55537



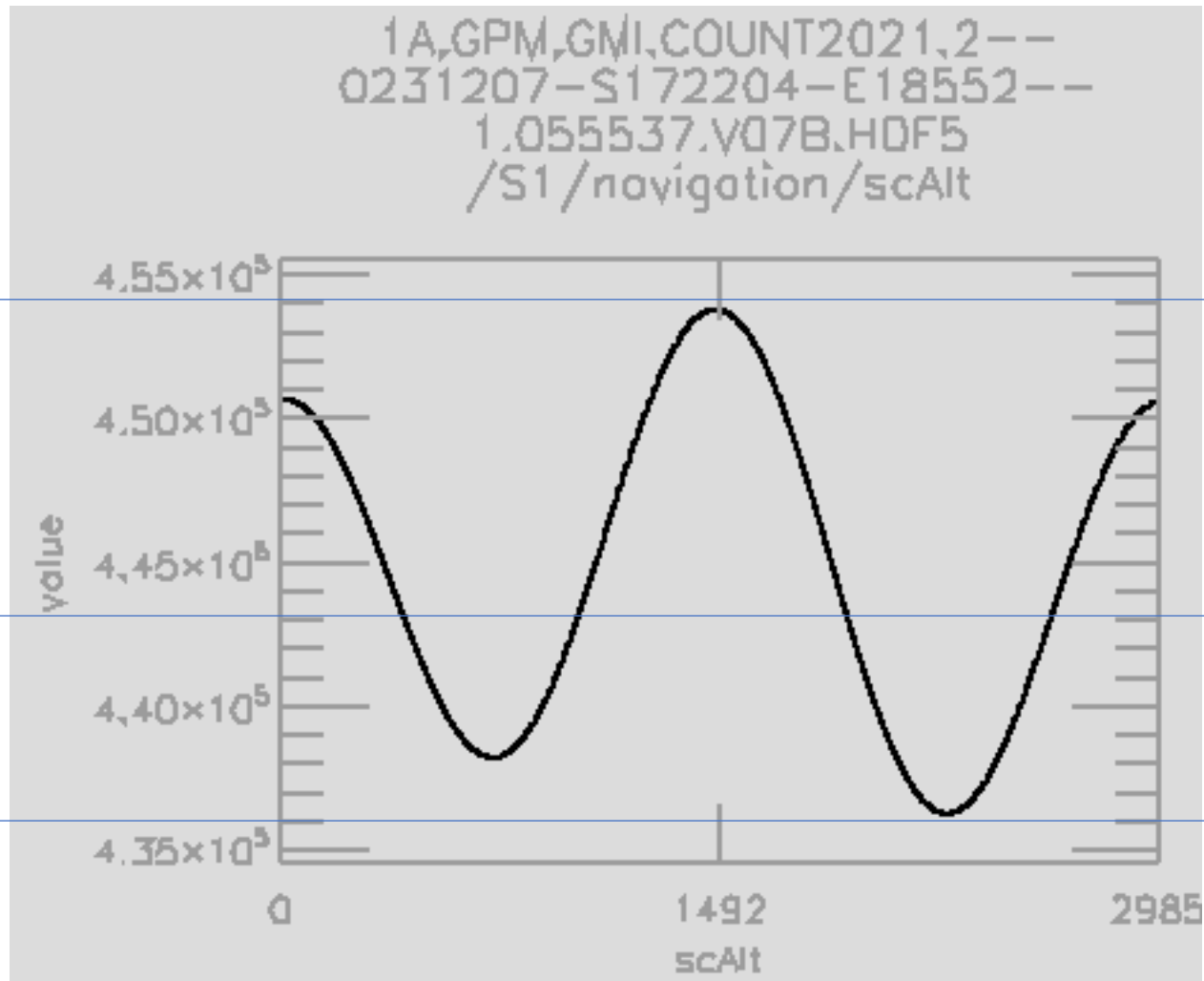
Note that the median geodetic altitude for the target box is 443 kilometers, so the targeting moved the average altitude from a little below the median to a little above the median. The target geodetic range at the new altitude is from 432 kilometers to 454 kilometers.

Altitude history for granule just-after 35 km boost compared to just-after 1st Drag-Make-Up (DMU) maneuver #112.

Just after Boost 11/8, granule 55091



After orbit adjust 12/7, granule 55537



Note that the lowest geodetic altitude, is now over the descending phase of the orbit near the equator. Otherwise, the minimum and maximum geodetic height is about the same for these two orbits. The highest geodetic heights remain over the northernmost latitudes for each orbit since the boost.